The Haines Borough
PO Box 1209
Haines, Alaska 99827
907-766-2231

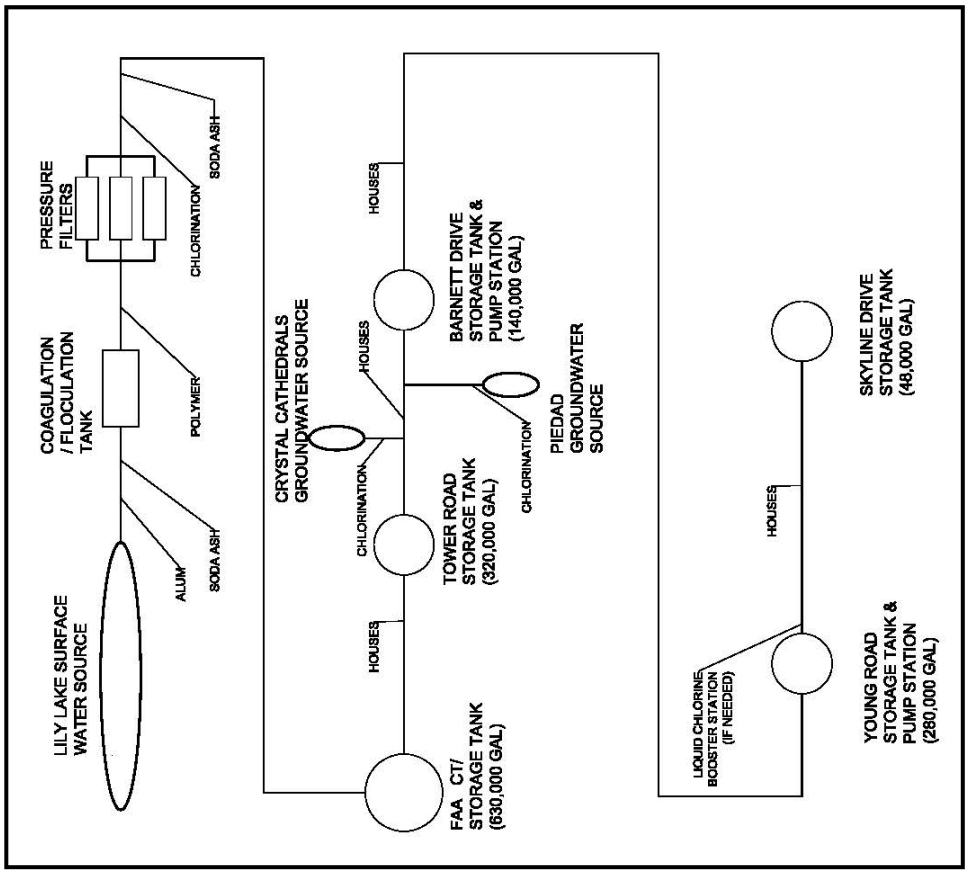
PRSRT STD
US POSTAGE PAID
HAINES AK
PERMIT NO. 3

2016

HAINES BOROUGH CCW

DRINKING WATER QUALITY REPORT

Postal Customer



Schematic of Haines Borough Water System

Lily Lake, one of three sources for the Haines Borough Public Water System

Haines Borough

How Safe Is My Water?

We are pleased to present this year's *Annual Water Quality Report* (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies. Last year, we conducted tests for over 80 contaminants. None were found to be higher than what EPA and ADEC allows. As we informed you at the time, our water temporarily exceeded drinking water standards. (For more information see the *Violations Section* at the end of this report.)

What Precautions Do I Need to Take?

Some people may be more vulnerable to contaminants in water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplant, people with HIV /AIDS and other immune system disorders, some elderly, and infants can be particularly at-risk from infections. These people should seek advice about drinking water from their health care providers.

EPA and the Centers for Disease Control & Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline at 800-426-4791.

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Monitoring & Reporting of Data Compliance Violations

Boil Water Notice

- Total coliform are naturally present in the environment. Coliforms are bacteria that indicate other, potentially harmful bacteria may be present.
- Routine sampling In May showed the presence of coliform bacteria during: One sample showed the presence of total coliform bacteria.
- ADEC advised the Haines Borough to issue a boil water notice while additional water sampling and analysis were performed.
- Repeat testing showed satisfactory results, and the boil water notice was canceled.

Copper Action Level Exceeded

- Copper (Cu) is a reddish metal that is commonly used in household plumbing. It is also an essential nutrient for humans in small amounts; however, too much copper can cause adverse health effects as water that is corrosive can leach from pipes into drinking water. The longer water has stood idle in copper pipes, the more likely Cu will be in your water.
- The EPA Action Level for copper was exceeded at two of the ten testing sites in December. Since then monitoring for copper and lead has increased from ten samples per year to 40 samples (quarterly tests at sample sites).
- To reduce exposure to copper, run your household water that is used for cooking and drinking until you feel the water get colder (generally 30 to 60 seconds) anytime it has not been used for more than six hours to clear the pipes and bring in fresh water. Furthermore, hot water dissolves copper more quickly than cold water; if you need hot water for cooking or drinking, take water from the cold tap and heat it.

Additional Information

If you have questions about this report or need more information, contact:

Scott Bradford
P0 Box 1209
Haines, AK 99827
907-766-2200 or 907-766-2716
sbradford@haines.ak.us

More Water Quality Data & Definitions

CONTAMINANTS	MCLG or MRDLG	MCL, TT or MRDL	YOUR WATER	RANGE LOW	RANGE HIGH	SAMPLE DATE	VIOLATION	TYPICAL SOURCE
Radioactive Contaminants								
LILY LAKE & PIEDAD SPRING								
Alpha emitters PCI/L	NA	15	0.67	NA	NA	2015	No	Erosion of natural deposits
Radium 226/228 PCI/L	NA	5	0.10	NA	NA	2015	No	Erosion of natural deposits
CRYSTAL CATHEDRAL								
Alpha emitters PCI/L	NA	15	0.68	NA	NA	2014	No	Erosion of natural deposits
Radium 226/228 PCI/L	NA	5	0.62	NA	NA	2014	No	Erosion of natural deposits

UNIT DESCRIPTIONS	
Term	**Definition**
ppm	parts per million, or milligrams per liter (mg/L)
ppb	parts per billion, or micrograms per liter (µg/L)
PCI/L	picocuries per liter (a measure of radioactivity)
NA	not applicable
ND	not detected
NR	monitoring not required, but recommended.
IMPORTANT DRINKING WATER DEFINTIONS	
AL	The concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic acid: a byproduct of drinking water chlorination
MCL	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	The level of a contaminant in drinking water below which there is no known or expected risk to health; MCLGs allow for a margin of safety.
MNR	Monitored Not Regulated
MRDL	Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

2015 Water Report

Where Are the Sources for Our Public Water System?

The primary source of Haines drinking water is Lily Lake, located 2.5 miles southeast of the Haines Townsite on the Chilkat Peninsula. Approximately 20 percent of the Haines drinking water is supplied from the Piedad Spring System, a ground water source located 1.5 miles northwest of the Haines town site. About ten households in the Crystal Cathedral subdivision use the Crystal Cathedral wells, which are located 1.5 miles west of the Chilkoot Inlet, for a source.

Learn More About Water Quality in Our Borough

Source Water Assessments

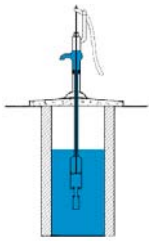
The public water system for the Haines Townsite is a Class A Water System consisting of three sources. The *Source Water Assessments* for each of these sources are available at the Haines Borough Administration Offices. These assessments are used by the by Haines Borough staff to assess water quality risks and can be used as a foundation for local volunteer protection efforts.

Lily Lake Source Water Assessment (LLSWA) - Surface Water Source

- The overall protection area received Susceptibility Rating of Very High.
- The overall protection area received a Vulnerability Rating of Medium for metals, other organic chemical and synthetic chemicals.

Piedad Spring Source Water Assessment (PSSWA) - Ground Water Source under Influence of Surface Water

- The combined score for the Wellhead and Aquifer has a natural Susceptibility Rating of Medium (the Wellhead and Aquifer each received an individual Susceptibility Rating of Medium).
- The combined score for the Wellhead and Aquifer received a Susceptibility Rating of Low for:
    - Bacteria/Viruses
    - Nitrites/Nitrates
    - Volatile Organic Chemicals
    - Heavy Metals
    - Synthetic Organic Chemicals
    - Other Chemicals



Crystal Cathedral Source Water Assessment (CCSWA)

- The combined score for the Wellhead and Aquifer has a natural Susceptibility Rating of Medium (the Wellhead and Aquifer each received an individual Susceptibility Rating of Medium).
- The combined score for the Wellhead and Aquifer received a Susceptibility Rating of Medium for:
    - Bacteria/Viruses
    - Nitrites/Nitrates
- The combined score for the Wellhead and Aquifer received a Susceptibility Rating of Low for:
    - Volatile Organic Chemicals
    - Heavy Metals
    - Synthetic Organic Chemicals
    - Other Chemicals

2015 Water Quality Data

CRYSTAL CATHEDRAL	**Barium – ppm**	2	2	0.04	NA	2013	No	Erosion of natural deposits; Discharge of drilling wastes & metal refineries
	Chromium - ppb	100	100	1.24	NA	2013	No	Erosion of natural deposits; Discharge from steel & pulp mills
	Fluoride – ppm	4	4	0.17	NA	2013	No	Erosion of natural deposits; Water additive; Discharge from fertilizer & aluminum factories
	Selenium - ppb	50	50	0.90	NA	2013	No	Erosion of natural deposits; Discharge from mines, petroleum & metal refineries
	Beryllium - ppb	4	4	0.27	NA	2009	No	Discharge from metal refineries & coal-burning factories, Discharge from electrical, aerospace & defense industries
	Arsenic - ppb	10	10	0	NA	2015	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass & electronics production wastes

2015 Water Quality Data

CONTAMINANTS	MCLG or MRDLG	MCL, TT or MRDL	YOUR WATER	RANGE LOW	RANGE HIGH	SAMPLE DATE	VIOLATION	TYPICAL SOURCE
Inorganic Contaminants			LILY LAKE & PIEDAD SPRING					
Barium - ppm	2	2	0.016	NA	NA	2013	No	Erosion of natural deposits; Discharge of drilling wastes & metal refineries
Chromium - ppb	100	100	0	NA	NA	2013	No	Erosion of natural deposits; Discharge from steel & pulp mills
Fluoride – ppm	4	4	0	NA	NA	2013	No	Erosion of natural deposits; Water additive; Discharge from fertilizer & aluminum factories
Selenium - ppb	50	50	0	NA	NA	2013	No	Erosion of natural deposits; Discharge from mines, petroleum & metal refineries
Beryllium - ppb	4	4	0	NA	NA	2013	No	Discharge from metal refineries & coal-burning factories, Discharge from electrical, aerospace & defense industries
Arsenic - ppb	10	10	0	NA	NA	2014	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass & electronics production wastes

What Contaminants Are Found in Our Drinking Water?

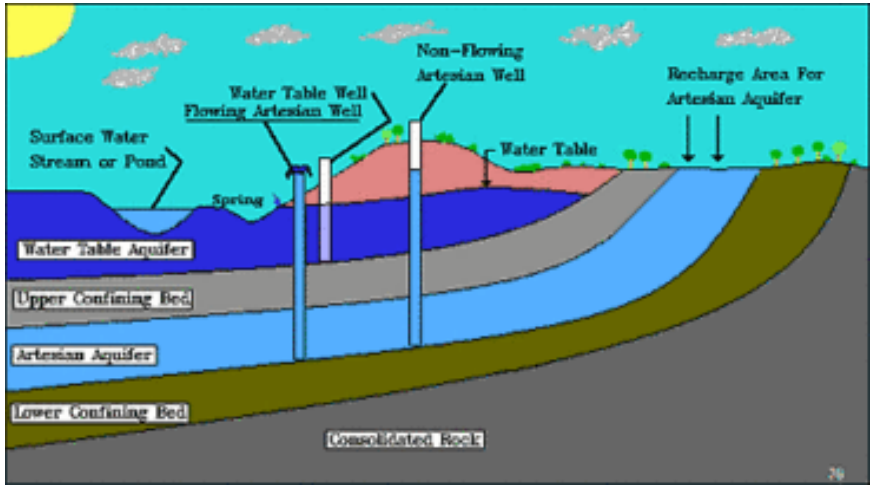
Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 800-426-4791.

The sources of drinking water, both tap water and bottled water, include:

- Rivers
- Lakes
- Streams
- Ponds
- Reservoirs
- Springs
- Wells

As water travels over the surface of the land or through the grounds, it dissolves other substances, including:

- Naturally occurring minerals
- Substances resulting from the presence of animals or from human activity
- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife)
- Inorganic contaminants, such as salts and metals (which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming)
- Pesticides and herbicides (which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses)
- Organic chemical contaminants, including synthetic and volatile organic chemicals (which are byproducts of industrial process and petroleum production and can also come from gas stations, urban stormwater runoff, and septic systems)
- Radioactive contaminants (which can be naturally occurring or be the result of oil and gas production and mining activities)



Citizen Involvement

Public Meetings & Protective Actions

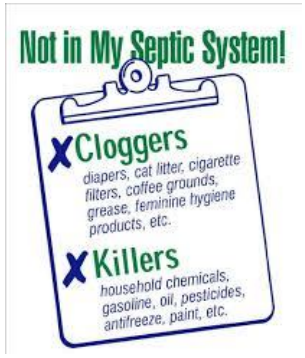
Citizens may get involved by attending the Haines Borough Assembly meetings. The dates and agenda are posted online at www.hainesborough.us

Meeting dates and agenda are also posted at the Borough Offices, Library and Post Office.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect our community drinking water source in several ways:

- Pick up after your pets.
- Eliminate excess use of lawn and garden fertilizers and pesticides; they contain hazardouschemicals that can reach your drinking water source.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.



CONTAMINANTS	MCLG	AL	YOUR WATER	SAMPLE DATE	# OF SAMPLES EXCEEDING AL	EXCEEDS AL	TYPICAL SOURCE
Inorganic Contaminants				LILY LAKE & PIEDAD SPRING			
Copper – ppm Consumer taps	1.3	1.3	1.4	2015	2	Yes	Corrosion of household plumbing systems; Erosion of natural deposits
Lead – ppb Consumer taps	0	15	1.4	2015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
				CRYSTAL CATHEDRAL			
Copper – ppm Consumer taps	1.3	1.3	0.42	2015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead – ppb Consumer taps	0	15	0.74	2015	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

2015 Water Quality Data

CONTAMINANTS	MCLG or MRDLG	MCL, TT or MRDL	YOUR WATER	RANGE LOW	RANGE HIGH	SAMPLE DATE	VIOLATION	TYPICAL SOURCE
Disinfectants & Disinfectant By-Products There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants								
LILY LAKE & PIEDAD SPRING								
TTHMs - ppb	NA	80	22.6	11.0	39.0	2015	No	By-product of drinking water disinfection
HAA5 - ppb	NA	60	35.5	5.0	65.0	2015	No	By-product of drinking water disinfection
CRYSTAL CATHEDRAL								
TTHMs - ppb	NA	80	2.9	NA	NA	2015	No	By-product of drinking water disinfection
HAA5 - ppb	NA	60	1.8	NA	NA	2015	No	By-product of drinking water disinfection

Water Conservation Tips

Do you know that the average U.S. household uses approximately 400 gallons of water per day or l 00 gallons per person per day? Luckily there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature. Visit www.cpa gov/watersense for more information.

- Take short showers: a *5*-minute shower uses 4 to *5* gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving to save up to 500 gallons a month.
- Use a water-efficient showerhead; these are inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait; if it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

More Source Water Protection Tips

- Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water."
- Produce and distribute a flyer for households to remindresidents that storm drains dump directly into your local water body.

Cross Connection Control Survey

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. The Haines Borough is responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue and, if needed, survey your connection and assist you in isolating it if that is necessary.

* Boiler/ Radiant heater (water heaters not included)
* Underground lawn sprinkler system
* Pool or hot tub (whirlpool tubs not included)
* Additional source(s) of water on the property
* Decorative pond
* Watering trough

More Information about Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home

plumbing. Haines Borough is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available form the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

2015 Water Quality Data

Water Quality Regulations

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels.

Unless otherwise noted, the data presented in the following tables — one set for Lily Lake and the Piedad Spring sources and the another for the Crystal Cathedral source — is from testing done in the calendar year of the report (2015). The EPA or the Alaska Department of Environmental Conservation (ADEC) requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In these tables you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided a table of terms and definitions before the data tables.

Water Treatment Process

Your water is treated by disinfection. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and other microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century. However, disinfection does create disinfection by-products which are monitoring to insure they remain at a safe level.